



Installation Manual
TWM Performance Short Shifter
Nissan 350Z, 370Z
Infiniti G35, G37

It is preferable to park on a flat surface, as you will have to engage and disengage the hand brake and shift from gears to neutral. If you cannot do so and are obliged to install the shifter on a slightly inclined surface, place wooden blocks in front or behind the wheels to prevent the car from moving while you're working.

Estimated Installation Time: 75 minutes

Tools required:

- Ratchet
- 10 mm socket
- 12 mm socket
- Ratchet extension
- Phillips head screwdriver
- Small flat head screwdriver (G37 only)
- Needle nose pliers/visegrips
- Jack and jackstands
- Bench vise (suggested)
- White lithium grease



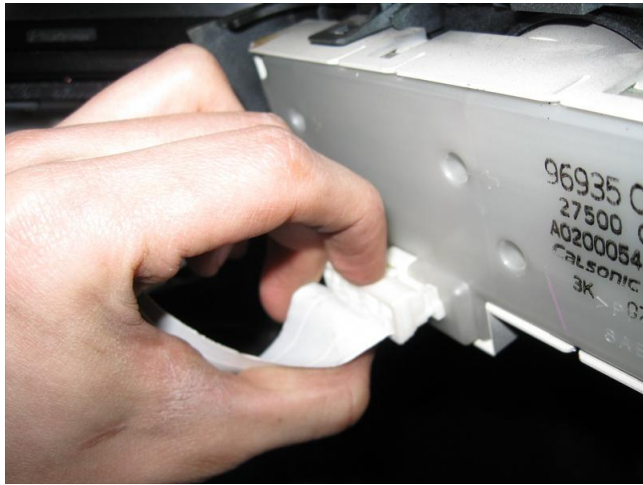
1. Remove the stock shift knob by rotating it counter clockwise. Put it aside for re-installation later. This step may require the use of a strap wrench because the shift knob is glued in place from the factory. Make sure you cover the stock knob with a piece of leather or a towel before using this tool, as it could be damaged during this step.



2. Remove the locking ring from the shifter threads.



3. Lift the center console from the bottom of the shift boot. It's only clipped on so it will come out easily.



4. Flip the console and unclip the wiring harness from it. You can now remove the center console from the car. Put it aside in a safe place for re-installation later.



5. For the 350Z/G35, skip steps #6 to #11 and proceed to step #12.

The following steps will only be required for the 370Z/G37 to have proper access to the shifter surrounding. To do so, the complete center compartment will need to be moved further back in the car in the 370Z and completely removed in the G37.

In the 370Z, pull on each side of the console as pictured. The sides will pop out of the center unit with light force.



6. Use a Philips head screwdriver to remove both screws highlighted to the left. The screws are located at the front of the console. Repeat for both sides of the console.

Put the screws aside in a safe place for re-installation later.



7. In the 370Z, working behind the seats, use a Philips head screwdriver to remove both screws holding the center compartment on each side of the console.

In the G37, remove the ashtray behind the center console and remove the small plastic panel surrounding the ashtray by pulling on it. Remove the two screws holding the ashtray light bulb or simply disconnect its harness.

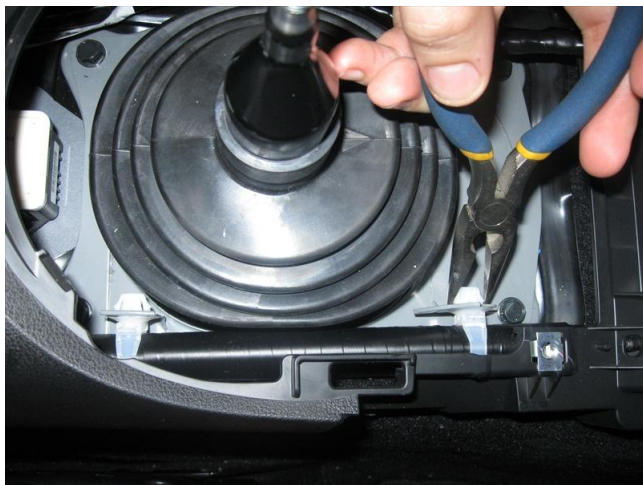
Working with the arm rest up, remove the small plastic cover where the arm rest hinge is using a flat head screw driver. This will uncover 4 screws, remove the two outside ones.

Put the screws aside for re-installation later.



8. Using a set of needle nose pliers, squeeze out the tabs holding the wire harnesses to the console on both sides of the shifter. Pictured to the left is the driver side.

In the G37, you will have to disconnect 2 wires like this in front of the shifter and one right behind the shifter. This is easier done with the center console shifted back a little bit so that you can undo the harness from under the console, sliding your hand in between the carpet and the center console.



9. From the passenger side, you will need to squeeze out both white tabs holding the harness to the shifter surrounding so the center console can be moved back a few inches.



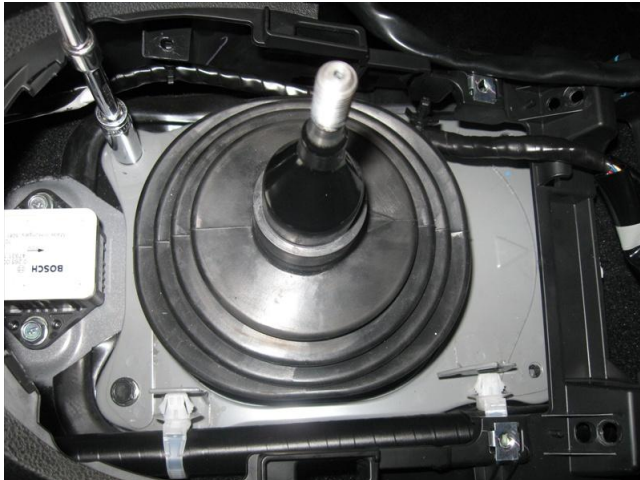
10. In the G37, you will have to remove the whole center console. To do this, unclip the hand brake soft plastic trim. This will make things a lot easier.



11. In the G37, pull back on the console, lift the rear up until it clears the hand brake handle and take the console out of the car. Put it in a safe place.



12. If your car is equipped with a white sound dampening insulation, remove it from the car and put it aside for re-installation later.



13. Now that the console has been moved back/removed, remove the two (2) bottom bolts from the shifter surrounding plate (only for 370Z).



14. In the 350Z, G35 and G37, remove the four (4) bolts holding the metal shifter surrounding.

Put the bolts aside for re-installation later.



15. Remove the metal shifter surrounding from the car and put it aside for re-installation later. Also remove the top rubber boot along with the metal shifter surrounding.



16. Remove the second rubber boot from the shifter and put it aside for re-installation later.



17. Using a 10 mm socket with a ratchet and an extension, remove the two (2) bolts from the reverse lockout plate as pictured. The bolts will not be re-used, however they should be kept in case you revert back to stock.

Place the shifter in 5th gear, this will make it easier for you to remove the bolt connecting the shift rod with the shifter.



18. For this step, you will need to lift the front of the car. Please refer to your car owner's manual for the procedure. Always work safely and use a proper jack with at least 2 jack stands. Locate the bottom part of the shifter (there will be a dust boot over it which you can slide off) under the car where it connects to the shift rod. Make sure the shifter is engaged in 5th gear and use a 12 mm socket with a ratchet to remove the bolt holding the shifter to the shift rod. Put the bolt aside for re-installation later.



19. Back inside the car remove the reverse lockout plate from the shifter. Put it aside for re-installation later.



20. Remove the shifter from the car.



21. Remove the spring from the shifter mount and put it aside for re-installation later.



22. The plastic cup needs to be removed from the stock shifter. It is a tight fit so a good way to remove it is to place the cup and shifter on a bench vise as pictured and hammer the shifter out of the cup. Make sure the bottom of the shifter is on top so you can hammer it out by hitting the bottom part of the shifter. Once it's removed, keep the plastic cup to install it on the TWM short shifter. The shifter itself will not be re-used.



23. Grease the main pivot ball on the TWM short shifter.



24. Clean the inside of the plastic cup and then apply some grease to the inside.



25. Install the TWM short shifter in the plastic cup. You can use the bench vise as pictured to pop the shifter back inside the cup. Make sure the reverse lockout pin of the short shifter is aligned with the part of the plastic cup where there is no black rubber on top of it.



26. Back inside the car, install the round metal spacer inside the shifter hole.



27. Put the spring removed in step #19 over the metal spacer.



28. Place the top metal spacer as pictured on the left.



29. Install the TWM short shifter in place.



30. Place the reverse lockout plate over the shifter and align the holes with the holes of the spacer and the holes of the shifter mechanism.



31. Install the two (2) bolts with washers provided in the package in place but do not completely tighten them down yet.



32. Back under the car, install both stainless steel bushings inside the bottom portion of the TWM short shifter. The smaller diameter face goes inside the shifter.

Insert the bottom of the shifter with the bushings installed inside the shift rod.

Now before doing to the next step, make sure the reverse lock pin is in the proper position from inside the car. The pin has to point toward the passenger side.



33. Re-install the bolt to hold the shift rod to the shifter. Tighten to approximately 8 lbs-ft.

Place the dust boot back over the shifter/shift rod.



34. Back inside the car you can adjust the reverse lockout plate. The shifter should be in 5th gear so the reverse lockout pin on the shifter needs to touch the plate. Once it's properly adjusted, tighten all bolts. Make sure all gears engage properly, especially 5th and 6th gears to be sure the plate is correctly installed. If the shifter is too stiff to move, the bolt under the car may be over tightened. Once everything is correct, proceed to the next step.



35. Re-install everything in reverse from step #16 to #1 for the 350Z/G35.

In the 370Z/G37, re-install everything in reverse from step #16 to #4 incl. In order to have the best fit for your stock shift boot, you may want to use the supplied boot collar. Adjust it about 3/8" above the dampening system.



36. In the 370Z, you will need to zip tie the upper rubber boot, pictured to the left, around the white plastic bushing to ensure a perfect fit.

This will sit on the boot collar. Test the shift boot and shift knob with this setup and make proper adjustments for the best fit.

The boot collar will need to be adjusted differently if you are using an aftermarket shift knob.



37. You are done! Thank you for choosing



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